

**INPATIENT MEDICATIONS**

**TECHNICAL MANUAL/**

**SECURITY GUIDE**

Version 5.0

December 1997

(Revised February 2011)

 Department of Veterans Affairs

Product Development

Revision History

Each time this manual is updated, the Title Page lists the new revised date and this page describes the changes. If the Revised Pages column lists “All,” replace the existing manual with the reissued manual. If the Revised Pages column lists individual entries (e.g., 25, 32), either update the existing manual with the Change Pages Document or print the entire new manual.

| **Date** | **Revised Pages** | **Patch Number** | **Description** |
| --- | --- | --- | --- |
| 02/11 | i, 53 62, 64, 65  | PSJ\*5\*226 | Added to RXC section Field 5, “Additive Frequency” in HL7 Ordering Fields; updated Front Door – IV Fluids table with Field 5; updated Back Door – IV Fluids table with Field 5; updated example.(M. Vo/B. Tatum, Developers; M. Colyvas, Technical Writer) |
| 06/10 | i, [22-23](#p113_22) | PSJ\*5\*113 | Added routine PSGSICH1.(R. Singer, DM; B. Thomas, Tech. Writer) |
| 02/10 | i, 23 | PSJ\*5\*214 | Added PSJQUTIL to the routine list in Section 5.1 for Patients on Specific Drug(s) Multidivisional Enhancements Project.(C. Willette, DM; R. Silverman/D. Dertien, Tech Writer) |
| 12/09 | 22-23 | PSJ\*5\*222 | Added routine PSGOEF2.(E. Wright, PM; S. B. Gilbert, Tech Writer) |
| 08/08 | vi, 23, 51-53, 57-58, 60-61, 63, 65, 65a-65b | PSJ\*5\*134 | Parameters for escaping special characters added. New HL7 messages added. New routines added. HL7 order fields table contains an asterisk for each field that has special escaping characters.(S. Templeton, PM; G. O’Connor, Tech. Writer) |
| 02/07 | 74-76  | PSJ\*5\*178 | MED ROUTE now appears in larger font on IV labels from the Zebra bar code printer. Med ROUTE now prints on the IV labels for bar-code enabled printers, and it prints in larger font than surrounding text.(R. Singer, PM; E. Phelps, Tech. Writer) |
| 09/06 | 23, 94 | PSJ\*5\*172 | Encapsulation Cycle II project: Added PSJ53P1 to the Routine List in Section 5.1. Added DBIA 4537 to DBIA list. Changed the date on the Title Page to December 1997. (H. Whitley, PM; L. Woodson, TW) |
| 05/06 | v-viii8a-8b66-68b | PSJ\*5\*154 | In Section 2.2.2 Added “PRIORITIES FOR NOTIFICATION” field.In Section 9.5, made correction to include the priority of ASAP in notifications. Added information regarding the three notifications parameters.(C. Greening, PM; T. Dawson, Tech. Writer) |
| 12/2005 | 23 | PSJ\*5\*146 | Remote Data Interoperability (RDI) Project: Added PSJLMUT2 to the Routine List in Section 5.1.(E. Williamson, PM; M. Newman, Tech. Writer) |
| 11/2005 | All | PSJ\*5\*163 | Encapsulation Cycle II project: Added PSJ59P5 to the Routine List in Section 5.1. Added DBIA 4819 to DBIA list. Deleted DBIAs 172, 634, and 1882 from the DBIA list.Reissued entire document due to a page numbering issue.(H. Whitley, PM; L. Woodson, TW) |

Preface

This technical manual is written for the Information Resources Management Service (IRMS) Chief/Site Manager and the Automated Data Processing Application Coordinator (ADPAC) for implementation and installation of the Inpatient Medications package. The main text of the manual outlines routine descriptions, file list, site configuration issues, variables, resource requirements, and package security.

(*This page included for two-sided copying*.)

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| ***SEG*** | ***SEQ*** | ***FIELD NAME*** | ***EXAMPLE*** | ***HL7 TYPE*** |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  **{ RXC }** | 1 | RX Component Type | B | table 166 |
|  | 2 | Component Code\* | ^^^4132^D5 W NS^99PSD | coded element |
|  | 3 | Component Amount | 1 | numeric |
|  | 4 | Component Units\* | ^^^PSIV-1^ML^99OTH | coded element |
|  | 5 | Additive Frequency | 1, 3 | string |
|  |  |  |  |  |
|  **{ OBX }** | 1 | Set ID | 1 | set ID |
|  | 2 | Value Type | TX | table 125 |
|  | 3 | Observation ID | ^^^38^Critical Drug-Drug interaction^99OCX | coded element |
|  | 5 | Observation Value | Critical drug-drug interaction Aspirin-Warfarin | string |
|  | 14 | Date/time of Observation | 199606130813 | timestamp |
|  | 16 | Observer | 10 | composite ID |
|  |  |  |  |  |
|  **NTE** | 1 | Set ID | 1 | set ID |
|  | 2 | Source of Comment | P | table 105 |
|  | 3 | Comment | Worth the risk | formatted text |
|  |  |  |  |  |
|  **ZRX** | 1 | Previous Order # | 2355 | numeric |
|  | 2 | Nature of Order | W | set of codes |
|  | 3 | Reason Order Created | N | set of codes |
|  | 4 | Routing | W | set of codes |
|  | 5 | Current User\* | DUZ^NAME^99NP | composite ID |
|  | 6 | IV Identifier | IV | string |
|  |  |  |  |  |
|  **ZSC** | 1 | Service Connected | SC | coded element |
| **}** |  |  |  |  |

\*- Fields marked with an asterisk require special escaping characters in order to send and receive the correct data contained in an HL7 message. See **Special Escaping Characters** for details.

\*\*-RXC Segment Field 5 “Additive Frequency” only applies for additives to specify IV bag information.

**Note:** The following are definitions of some of the data fields under the FIELD NAME column.

SENDING APPLICATION is the name of the VistA package generating the message; RECEIVINGAPPLICATION is the name of the VistA package that is the intended recipient of the message. SENDING FACILITY and RECEIVING FACILITYare the station numbers.

PATIENT ID is the patient IEN in the PATIENT file (#2).

**Front Door - IV Fluids**

IV fluid orders use a RXC segment to contain information about solutions and additives. Therefore, a special code is sent in a RXO segment;1 to identify the order as an IV order (PS-1^IV Order^99OTH). Since RXC segments are used, the give fields in a RXO segment are unnecessary.

| ***Action*** | ***Request from OE/RR*** | ***Pharmacy accepts*** | ***Pharmacy rejects*** |
| --- | --- | --- | --- |
|  |  |  |  |
| **Protocol** | OR EVSEND PS | PS EVSEND OR | PS EVSEND OR |
| **Order Control** | NW (new order)XO (changed order) | OK (accepted)XR (new order) | UA (unable to accept)UX (unable to change) |
| **HL7 Fields** | MSH: 1,2,3,4,5,6,7,9PID: 3,5PV1: 2,3ORC: 1,2,7,9,10,12,15,16RXO: 1,2NTE: 1,2,3RXC: 1,2,3,4, 5OBX: 1,2,3,5,14,16ZRX: 1,2,3 | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,2,3,5 | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,2,3,12,15,16 |
|  |  |  |  |
| **Protocol** | OR EVSEND PS |  |  |
| **Order Control** | ZV (verified) |  |  |
| **HL7 Fields** | MSH: 1,2,3,4,5,6,7,9PID: 3,5PV1: 2,3ORC: 1,2,3,11,15 | There is no return event. |  |
|  |  |  |  |
| **Protocol** | OR EVSEND PS | PS EVSEND OR | PS EVSEND OR |
| **Order Control** | CA (cancel)DC (discontinue)HD (hold)RL (release)SS (send status) | CR (canceled)DR (discontinued)HR (held)OR (released)SC (status update) | UC (unable to cancel)UD (unable to dc)UH (unable to hold)UR (unable to release)DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,5,6,7,9PID: 3,5PV1: 2,3ORC: 1,2,3,10,12,15,16 | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,2,3,5 | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,2,3,16 |

**Example: POTASSIUM CHLORIDE INJ,SOLN FOR IV ORDERS 125 MEQ in**

 **SODIUM INJ,SOLN FOR IV ORDERS 1000 ml 100 ml/hr**

***New Order CPRS Continuous***

MSH|^~\&|ORDER ENTRY|13000|PHARMACY|13000|20080304170

224-0600||ORM

PID|||750||PSJPATIENT,TESTPAT-FIVE

PV1||I|5|||||||||||||||||||||||||||||||||||||||||

ORC|NW|12615;1^OR|||||^^^^^R||200803041702-0600|11884

||11884|||20080304170224-0600|I^POLICY^99ORN^^^

RXO|^^^PS-1^IV^99OTH|333 ml/hr

RXR|^^^14^INTRAVENOUS^99PSR

RXC|B|^^^196^DEXTROSE INJ,SOLN ^99PSP|50|^^^PSIV-1^ML

^99OTH

RXC|A|^^^435^MORPHINE INJ ^99PSP|33|^^^PSIV-1^ML^99OT

H

ZRX||I|N|||C

***New Order CPRS Intermittent***

MSH|^~\&|ORDER ENTRY|13000|PHARMACY|13000|20080304170

224-0600||ORM

PID|||750||PSJPATIENT,TESTPAT-FIVE

PV1||I|5|||||||||||||||||||||||||||||||||||||||||

ORC|NW|12616;1^OR|||||^BID&01-13^^^^R||200803041702-0

600|11884||11884|||20080304170224-0600|I^POLICY^99ORN^^^

RXO|^^^PS-1^IV^99OTH|

RXR|^^^15^INTRAMUSCULAR^99PSR

RXC|B|^^^196^DEXTROSE INJ,SOLN ^99PSP|500|^^^PSIV-1^M

L^99OTH

RXC|A|^^^281^FUROSEMIDE INJ,SOLN ^99PSP|33|^^^PSIV-4^

MG^99OTH

ZRX||I|N|||I

**Back Door - IV Fluids**

| ***Action*** | ***Event from Pharmacy*** | ***OE/RR accepts*** | ***OE/RR rejects*** |
| --- | --- | --- | --- |
|  |  |  |  |
| **Protocol** | PS EVSEND OR | OR EVSEND PS | OR EVSEND PS |
| **Order Control** | SN (send number)ZC (conversion) | NA (number assigned) | DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,3,5,9,10,12,15,16RXE: 1,23,24RXC: 1,2,3,4, 5ZRX: 1,2,3,5,6 | MSH: 1,2,3,4,5,6,7,9PID: 3,5PV1: 2,3ORC: 1,2,3 | MSH: 1,2,3,4,5, 6,7,9PID: 3,5ORC: 1,2,3,16 |
|  |  |  |  |
| **Protocol** | PS EVSEND OR |  | OR EVSEND PS |
| **Order Control** | SC (finished)XX (order changed) |  | DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,2,3,5,9,10,12,15,16RXE: 1,23,24NTE: 1,2,3RXC: 1,2,3,4, 5ZRX: 1,2,3,5,6 | There is no return event. OE/RR must accept the instruction from Pharmacy. | MSH: 1,2,3,4,5, 6,7,9PID: 3,5ORC: 1,2,3,16 |
|  |  |  |  |
| **Protocol** | PS EVSEND OR |  | OR EVSEND PS |
| **Order Control** | OC (cancel)OD (discontinue)OH (hold)OR (release)SC (status change) |  | DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,9PID: 3,5PV1: 2,3ORC: 1,2,3,5,9,10,12,15,16RXE: 1ZRX: 2,5 | There is no return event. OE/RR must accept the instruction from Pharmacy. | MSH: 1,2,3,4,5, 6,7,9PID: 3,5ORC: 1,2,3,16 |

**Example: POTASSIUM CHLORIDE INJ,SOLN FOR IV ORDERS 125 MEQ in**

 **SODIUM INJ,SOLN FOR IV ORDERS 1000 ml 100 ml/hr**

***New Order Continuous***

MSH|^~\&|PHARMACY|500|||||ORM|||||||||

PID|||750||PSJPATIENT,TESTPAT-FIVE|||||||||||||||||

PV1||I|5^||||||||||||||||3351||||||||||||||||||||||||

|||||||

ORC|SC|12619^OR|46V^PS||CM||^&^^^^^||200803041719-060

0|11884^PROVIDER,INPATIENT||11884^PROVIDER,INPATIENT|||200803041900-0600|W^Written^99ORN^^^||

RXO|^^^435^MORPHINE INJ^99PSP||||||||||||||||

RXE|^&^^200803041900-0600^200803100000-0600^|||||||||

||||11884^PROVIDER,INPATIENT^99NP|||||||^^99PSA^^^||300|^^^^ml/hr^PSU||

RXC|A|^^^435^MORPHINE^99PSP|20|^^^PSIV-1^ML^99OTH|1,3|||

||||||||||||||||

RXC|B|^^^196^DEXTROSE^99PSP|1000|^^^PSIV-1^ML^99OTH||

||||||||||||||||||

RXR|^^^14^INTRAVENOUS^99PSR|||

ZRX||W|N||11884^PROVIDER,INPATIENT^99NP|C

***New Order Intermittent***

MSH|^~\&|PHARMACY|500|||||ORM|||||||||

PID|||750||PSJPATIENT,TESTPAT-FIVE|||||||||||||||||

PV1||I|5^||||||||||||||||3351||||||||||||||||||||||||

|||||||

ORC|SC|12620^OR|47V^PS||CM||^Q4H&01-05-09-13-17-21^^^

^^||200803041721-0600|11884^PROVIDER,INPATIENT||11884^PROVIDER,INPATIENT|||200803041700-0600|W

^Written^99ORN^^^||

RXO|^^^281^FUROSEMIDE INJ,SOLN^99PSP||||||||||||||||

RXE|^Q4H&01-05-09-13-17-21^^200803041700-0600^2008030

60000-0600^|||||||||||||11884^PROVIDER,INPATIENT^99NP|||||||^01-05-09-13-17-21^99PSA^^^

||INFUSE OVER 300 MINUTES|||

RXC|A|^^^281^FUROSEMIDE^99PSP|250|^^^PSIV-4^MG^99OTH|1,3

|||||||||||||||||||

RXC|B|^^^196^DEXTROSE^99PSP|1000|^^^PSIV-1^ML^99OTH||

||||||||||||||||||

RXR|^^^160^IV PIGGYBACK^99PSR|||

ZRX||W|N||11884^PROVIDER,INPATIENT^99NP|I